

Attorney Docket No: 3467-72965
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	William B. Greenwald	Confirmation No. 9232
Serial No.:	10/692,839	Art Unit: 3637
Filed:	October 24, 2003	Examiner: Tran, Hanh Van
For:	Telescoping Slide Assembly With Quick-Mount Keyhole Lock System	

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an appeal brief in support of an appeal taken from the final rejection of claims 1-31, mailed 07 March 2007. A Notice of Appeal was filed on 06 June 2007.

1. **Real party in interest.** All rights in this application have been assigned to General Devices, Inc., a corporation existing under the laws of the state of Indiana.
2. **Related appeals and interferences.** Appellant and undersigned counsel for appellant knows of no appeals or interferences related to the present application on appeal.
3. **Status of Claims.** The application contains Claims 1-31. Claims 1-17 and 20-23 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. (U.S. Patent No. 6,948,691) in view of Lauchner et al. (U.S. Patent No. 6,796,625). Claim 31 stands rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. and Cheng (U.S. Patent No. 6,588,866). Claims 18-19 and 26-27 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. and Cheng. Claims 24-25 and 28-30 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al., Cheng and Klakovich (U.S. Patent No. 3,133,768). The rejections of claims 1-31 are appealed.

4. **Status of Amendments.** All amendments filed by appellant have been entered and considered by the examiner. Appellant has not filed an after final amendment.

5. **Summary of Claimed Subject Matter - (the numbers are corresponding drawing reference numbers, the portion in parenthesis refers to a corresponding page and line number(s) of the specification and the portion in brackets refers to a corresponding drawing).**

The invention described in independent claim 1 is directed to a telescoping slide assembly 14 comprising interconnected load-carrying 12, intermediate 18, and stationary 20 slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a keyhole-shaped slot 34 providing an enlarged-diameter entry and exit portion 60 and a narrow-width post-retainer portion 61, the keyhole-shaped slot being adapted to receive a mounting post 30 coupled to a piece of equipment to be carried on the load-carrying slide, and a post retainer 10 including a base 20 coupled to the load-carrying slide and an arm 22 formed to include a retention aperture 24 and being coupled to the base to move relative to the load-carrying slide between a slot-opening position lying away from the load-carrying slide to allow movement of the mounting post into the enlarged-diameter entry and exit portion of the keyhole-shaped slot [Fig. 9] and a slot-closing position receiving the mounting post in the retention aperture upon movement of the mounting post from the enlarged-diameter entry and exit portion into the narrow-width post-retainer portion of the keyhole-shaped slot [Fig. 10].

The invention described in dependent claim 2 is directed to the assembly of claim 1, wherein the arm 22 includes an actuator 23 and a body 25 arranged to interconnect the actuator and the base 20, the body is formed to include the retention aperture 24, and the actuator includes means (page 7, lines 16-26) [Fig. 8], facing toward the enlarged-diameter entry and exit portion 60 of the keyhole-shaped slot 34, for intercepting a mounting post 30 moving into the enlarged-diameter entry and exit portion and bending the body to cause the body to move away from the load-carrying slide 12 so that the mounting post can pass from the enlarged-diameter entry and exit portion of the keyhole-shaped slot into the narrow-width post-retainer portion 61 of the keyhole-shaped slot and the retention aperture formed in the body whereupon the actuator moves toward the load-carrying slide under a restoring force applied by the body to block removal of the mounting post from narrow-width post-retainer portion and the retention aperture.

The invention described in dependent claim 3 is directed to the assembly of claim 2, wherein the arm 22 further includes a lift tab 26 arranged to lie at an angle relative to the body 25 and to the load-carrying slide 12 to provide means (page 7, line 28 to page 8, line 2) [Fig. 5] for allowing a user to grip the retainer 10 and move the actuator 23 away from the load-carrying slide to bend the body to release the mounting post 30 from the retention aperture 24 so that the mounting post is free to move from the narrow-width post-retainer portion 61 of the keyhole-shaped slot 34 into the enlarged-diameter entry and exit portion 60 of the keyhole-shaped slot in preparation for removal of the mounting post from the keyhole-shaped slot.

The invention described in independent claim 18 is directed to a telescoping slide assembly 14 comprising interconnected load-carrying 12, intermediate 18, and stationary 20 slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide having a generally flat wall 57 and being formed to include a slot 34 surrounded in the plane of the wall by the generally flat wall, and a post retainer 10 coupled to the load-carrying slide and formed to include a retention aperture 24 adapted to receive a mounting post 30 coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position [Fig. 10] adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position [Fig. 9] adapted to release the mounting post from the slot and the retention aperture.

The invention described in independent claim 20 is directed to a telescoping slide assembly 14 comprising interconnected load-carrying 12, intermediate 18, and stationary 20 slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a slot 34, a post retainer 10 coupled to the load-carrying slide and formed to include a retention aperture 24 adapted to receive a mounting post 30 coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position [Fig. 10] adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position [Fig. 9] adapted to release the mounting post from the slot and the retention aperture, and wherein the post retainer further includes a distal end formed to include a

lift tab 26 arranged to extend at an angle relative to the base 20 in a direction toward the intermediate slide upon movement of the load-carrying and intermediate slides to a retracted position within the stationary slide.

The invention described in dependent claim 21 is directed to the assembly of claim 20 wherein the post retainer 10 further includes an actuator 23 arranged to interconnect the body 20 and the lift tab 26 and configured to provide means for intercepting a mounting post 30 moving into an entry and exit portion of the slot 34 to move the body relative to the load-carrying slide so that the mounting post is free to move in the slot to a post-retainer portion of the slot and into the retention aperture 24 formed in the body.

The invention described in independent claim 23 is directed to a telescoping slide assembly 14 comprising interconnected load-carrying 12, intermediate 18, and stationary 20 slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a slot 34, a post retainer 10 coupled to the load-carrying slide and formed to include a retention aperture 24 adapted to receive a mounting post 30 coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position [Fig. 10] adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position [Fig. 9] adapted to release the mounting post from the slot and the retention aperture, and wherein the post retainer includes, in series, a base 20, a body 25 formed to include the retention aperture, an actuator 23 arranged to intercept a mounting post moving into an entry and exit portion of the slot, and a lift tab 26 arranged to extend at an angle relative to the body.

The invention described in independent claim 26 is directed to a telescoping slide assembly 14 comprising interconnected load-carrying 12, intermediate 18, and stationary 20 slides movable relative to one another to extend and retract the load-carrying and intermediate slides, a generally flat wall 57 of the load-carrying slide being formed to include forward and rearward slots 34, each slot being adapted to receive a mounting post 30 coupled to a piece of equipment to be carried on the load-carrying slide, at least one of said slots being formed to permit the post only to enter the slot by moving generally perpendicular to the plane of the generally flat wall, and a post retainer 61 including a body formed to include a retention aperture

24 and a base 20 coupled to the post retainer and to the load-carrying slide, the body being arranged to move relative to the base from a slot-closing position [Fig. 10] blocking exit of a mounting post located in the rearward slot and in the retention aperture from the rearward slot to a slot-opening position [Fig. 9] allowing movement of a mounting post into and out of the rearward slot.

6. **Grounds of rejection to be reviewed on appeal.**

Claims 1-17 and 20-23 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. Claim 31 stands rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. and Cheng. Claims 18-19 and 26-27 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. and Cheng. Claims 24-25 and 28-30 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al., Cheng and Klakovich.

7. **Argument.**

Brock et al. discloses an apparatus for slidably mounting a computer server in a server rack structure. As seen in Figs. 15-17, a lock is provided at one of the slots 254 of each of the telescoping portions 14 to limit longitudinal movement of the chassis 250 with respect to the slides 10. The lock comprises a lock arm 256 that is attached at one end to the telescoping portion 14 of the slide 10 by rivets 258. A raised portion 263 is provided at the other end of the lock arm 256. The raised portion 263 preferably defines an inclined surface that extends into the slot and towards the rear of the lock arm 256. When the chassis 250 is moved rearwardly with respect to the slides 10, the head portions 255 of the mounting pins 252 ride over the inclined surfaces of the raised portions 263 of the lock arms 256. The lock arms 256 flex outwardly to allow passage of the mounting pins 252 in the associated slots 254. When the mounting pins reach the ends of the longitudinally extending portions 262 of the slots 254, the raised portions 260 of the locks 256 prevent passage of the mounting pins 252 in the opposite direction, thereby locking the chassis 250 in place. To remove the chassis 250, the ends of the locks 256 opposite the rivets 258 must be pulled outwardly to allow passage of the mounting pins 252 in the slots 254. See column 7, lines 25-48.

Lauchner et al. discloses slot portion 114 employed to couple with tab portion 210 of FIGS. 2A and 2B to provide a locking mechanism.

The rejection of claims 1-17 and 20-23 under 35 U.S.C. 103(a).

Claims 1-17 and 20-23 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al.

Claim 1

Claim 1 is directed to a telescoping slide assembly comprising slides movable relative to one another, the load-carrying slide being formed to include a keyhole-shaped slot providing an enlarged-diameter entry and exit portion and a narrow-width post-retainer portion and a post retainer including a base coupled to the load-carrying slide and an arm formed to include a retention aperture and being coupled to the base to move relative to the load-carrying slide between a slot-opening position lying away from the load-carrying slide to allow movement of the mounting post into the enlarged-diameter entry and exit portion of the keyhole-shaped slot and a slot-closing position receiving the mounting post in the retention aperture upon movement of the mounting post from the enlarged-diameter entry and exit portion into the narrow-width post-retainer portion of the keyhole-shaped slot.

The office action describes Brock et al. then at page 3, last three lines, states that “[t]he only different (sic, difference) being that Brock does not disclose the arm of the post retainer formed to include a retention aperture (in (sic) instead of a raise portion as disclosed).” The office action concludes that “it would have been obvious to modify the structure of Brock et al by providing the arm of the post retainer formed to include a retention aperture for the purpose of providing a secured engagement between the mounting post 210 and the post retainer, as taught by Lauchner et al.” (Office action at page 4, lines 8-11).

This proposed modification of Brock et al. is not obvious and is not operable. The proposed modification suggests providing a hole (retention aperture) in Brock et al.’s lock arm 256. Where would such hole be placed? If it were in the located close to raised portion 263 so that raised portion 263 functions as intended by Brock et al. (e.g., functions to block forward movement of head portion 255) then there would be no or little surface to attach raised portion 263 and the function of raised portion 263 would be lost. If the hole were placed a distance from raised portion 263 then head portion 255 would not contact raised portion 263 and the function of raised portion 263 would be lost. If a proposed modification of a prior art device would render the prior art device unsatisfactory for its intended purpose then the modification is

improper.¹ Here, for the reasons noted above, modification of Bock et al. as suggested in the office action would render Brock et al.'s raised portion 263 inoperable for its intended purpose.

If the proposed modification of the prior art would change the principle of operation of the prior art invention then the teachings of the references are not sufficient to render the claims *prima facie* obvious.² The modification proposed by the office action would remove the purpose of the raised portion 263 and thus change the principle of operation of Bock et al.'s device.

It is improper to employ hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art.³ There is nothing in the prior art that would suggest the modification proposed in the office action. It appears that the office action improperly attempts to reconstruct the claimed invention using hindsight and pieces of the invention from the prior art disclosures. The reason given in the office action for the alleged combination of Brock et al. and Lauchner et al. is that "both teach alternate conventional drawer slide locking structure, used for the same intended purpose of locking/holding one member relative to another, thereby providing structure as claimed." Just because both Brock et al. and Lauchner et al. teach different locking structures for drawer slides doesn't mean that these different structures are combinable or that such would have been obvious to one of ordinary skill in the art.

Even assuming, for purposes of argument (and such is not conceded), that providing a hole in the lock arm 256 as suggested by the above-noted discussion in the office action, when the lock arm 256 is in the locked position the top flat face of the head portion 255 would be in the same plane and would not enter into or extend through the hole and there would be no locking of the head by the hole. This is because in Brock et al.'s locking position the top flat face of the head portion 255 defines a plane which plane faces an inside surface of the lock arm. That is, it is not evident that Brock et al.'s arm 256 would (if it had a retention aperture or hole) move to a "slot-closing position receiving the mounting post in the retention aperture" as recited in independent claim 1 or to a "slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture" as recited in independent claims 18, 20 and 23. Note the two rivets 258 holding arm 256 in a flat plane which faces the face of the head

¹ See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

² *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

³ See, e.g., *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

portion 255. The arm is not free to move closer to head portion 255 because of the way it is held by rivets 258 and the surrounding structure. And head portion 255 is not free to move closer to the arm 256 because such head portions extend only a limited distance so that it can fit in the longitudinally extending slot in telescoping portion 14.

Stated differently, Brock et al.'s mounting pin 252 has a head portion 255 (as best seen in Figs. 16 and 17) that does not extend far enough past the surface of portion 14 of the slide 10 such that it could extend into a hole in lock arm 256 even if such hole were provided as suggested by the above-quoted proposed modification. As seen in Fig. 17 of Brock et al. the surface of head 255 is flush with the surface of portion 14 of the slide 10. That is, the head 255 extends **up to** the lock arm 256 when the lock arm 256 is in the locked position. The right hand portion of Fig. 16 in Brock et al. shows the open end of slot 254 (which has a T-shaped configuration) and just to the left of this end a head portion 255 (in phantom) is shown with the flat disc-shaped portion in the slot. All of the flat disc-shaped head portions 255 (four head portions 255 are shown in Figs. 14, 15 and 18) extend the same distance from the chassis 250 which means **no flat disc-shaped head portion 255 could extend into or through a hole in the lock arm** even if one were provided. Thus, even if the lock arm 256 had a hole rather than a raised portion 263 as suggested by the office action the flat disc-shaped head portion 255 would not go into and through the hole and the arm would not be operable to lock the flat disc-shaped head portion.

For all of the above reasons, it would not have been obvious to provide a hole in the lock arm in Brock et al. and even if a hole were provided it would not be operable to lock the head portion 255 since the head portion 255 would not extend into and through the hole.

Claim 2

Claim 2 is dependent on claim 1 and further requires

means for intercepting a mounting post moving into the enlarged-diameter entry and exit portion and bending the body to cause the body to move away from the load-carrying slide so that the mounting post can pass from the enlarged-diameter entry and exit portion of the keyhole-shaped slot into the narrow-width post-retainer portion of the keyhole-shaped slot and the retention aperture formed in the body whereupon the actuator moves toward the load-carrying slide under a restoring force applied by the body to block removal of the mounting post from narrow-width post-retainer portion and the retention aperture.

Modification of Brock et al. by providing the retention hole of Lauchner et al. would not result in the “means” as recited in appellant’s claim 2. There is no prior art teaching or suggestion that would result in the claimed “means”. The rejection improperly relies on a hindsight review of appellant’s disclosure for motivation to combine these references. Brock et al. has no retention aperture in lock arm 256 and cannot provide the necessary motivation to arrive at the claimed “means” for intercepting... as recited in claim 2. Lauchner et al.’s retention aperture 114 does not intercept a mounting post so that the mounting post can pass from the enlarged-diameter entry and exit portion of the keyhole-shaped slot into the narrow-width post-retainer portion of the keyhole-shaped slot, etc. because there is no keyhole-shaped slot or mounting post movement in Lauchner et al.

Claim 3

Claim 3 is dependent on claim 2 and further requires

means for allowing a user to grip the retainer and move the actuator away from the load-carrying slide to bend the body to release the mounting post from the retention aperture so that the mounting post is free to move from the narrow-width post-retainer portion of the keyhole-shaped slot into the enlarged-diameter entry and exit portion of the keyhole-shaped slot in preparation for removal of the mounting post from the keyhole-shaped slot.

Modification of Brock et al. by providing the retention hole of Lauchner et al. would not result in the “means” as recited in appellant’s claim 3. There is no prior art teaching or suggestion that would result in the claimed “means”. The motivation alleged in the office action comes only from an improper hindsight review of appellant’s disclosure. Brock et al. has no retention aperture in lock arm 256 and cannot provide the necessary motivation to arrive at the claimed “means” for allowing... as recited in claim 3. Lauchner et al.’s retention aperture 114 does not release the mounting post from the retention aperture so that the mounting post is free to move from the narrow-width post-retainer portion of the keyhole-shaped slot into the enlarged-diameter entry and exit portion of the keyhole-shaped slot in preparation for removal of the mounting post from the keyhole-shaped slot, etc. because there is no keyhole-shaped slot or mounting post movement in Lauchner et al.

Claim 6

Claim 6 is dependent on claim 4 and further requires

a portion of the body to cover a portion of the narrow-width post-retainer portion of the keyhole-shaped slot and to cause the retention aperture to lie in alignment with the narrow-width post-retainer portion of the keyhole-shaped slot to allow the mounting post to extend through the narrow-width post-retainer portion and the retention aperture.

Neither Brock et al. or Lauchner et al. teach or suggest a retention aperture to lie in alignment with the narrow-width post-retainer portion of the keyhole-shaped slot to allow the mounting post to extend through the narrow-width post-retainer portion and the retention aperture as recited in claim 6. The office action conclusion that it would have been obvious to combine these references to arrive at this claimed feature, notwithstanding that it is not taught or suggested in these references, is a clear indication that the rejection is improper because it is based on hindsight and because the references do not combine to arrive at the claimed invention.

Claim 20

Claim 20 is directed to a telescoping slide assembly comprising slides movable relative to one another, the load-carrying slide being formed to include a slot, a post retainer formed to include a retention aperture adapted to receive a mounting post arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position adapted to release the mounting post from the slot and the retention aperture. Appellant's argument here is similar to that described above with respect to the rejection of claim 1. Neither Brock et al. or Lauchner et al. teach or suggest a retention aperture to lie in alignment with the narrow-width post-retainer portion of the slot to allow the mounting post to extend through the slot and the retention aperture at the same time as recited in claim 20. For the reasons noted above with respect to claim 1, modification of Bock et al. as suggested in the office action would render Brock et al.'s raised portion 263 inoperable for its intended purpose. The modification proposed by the office action would remove the purpose of the raised portion 263 and change the principle of operation of Bock et al.'s device.

Accordingly, there is no proper motivation to combine these references and Brock et al. and Lauchner et al. do not combine to arrive at the claimed invention because they do not

combine to provide a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture as recited in claim 20.

Claim 21

Claim 21 is dependent from claim 20 and provides a post retainer configured to provide means for intercepting a mounting post moving into an entry and exit portion of the slot to move the body relative to the load-carrying slide so that the mounting post is free to move in the slot to a post-retainer portion of the slot and into the retention aperture formed in the body.

Brock et al. and Lauchner et al. do not, taken alone or in combination, teach or suggest a means for intercepting a mounting post moving as recited in claim 21. In Brock et al. the mounting post 255 is not free to move in the slot to a post-retainer portion of the slot and into the retention aperture formed in the body. This is true at least because there is no retention aperture in Brock et al. For the reasons noted above modification of Brock et al. to provide a retention aperture as suggested in the office action would render Brock et al.'s raised portion 263 inoperable for its intended purpose and would change the principle of operation of Brock et al.'s device.

For at least these reasons, there is no proper motivation to combine these references and Brock et al. and Lauchner et al. do not combine to arrive at the claimed invention because they do not combine to provide means for intercepting a mounting post moving as recited in claim 21.

Claim 22

Claim 22 is dependent from claim 21 and provides the slot is keyhole-shaped.

Brock et al. does not teach or suggest a keyhole-shaped slot. A keyhole has a continuous edge in a surface surrounding and defining the keyhole shape. In Brock et al. the slot 254 is not continuous and is not surrounded by a surface. Accordingly, slot 254 is not a keyhole-shaped slot. Lauchner et al is not relied on for, and does not teach or suggest, a keyhole-shaped slot as recited in appellant's claim 21. For at least this reason, Brock et al. and Lauchner et al do not combine to arrive at the claimed invention in claim 22.

Claim 23

Claim 23 is directed to a telescoping slide assembly comprising slides movable relative to one another, the load-carrying slide being formed to include a slot, a post retainer formed to include a retention aperture adapted to receive a mounting post arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-

The chassis 250 is positioned over the slides 10 so that the mounting pins 252 are aligned with the slots 254, as illustrated in FIG. 14. The chassis 250 is then lowered onto the slides 10 so that the mounting pins 252 extend into the transversely extending portions 262 of the slots 254. The chassis 250 is then moved rearwardly with respect to the telescoping portions 14 of the slides 10 to engage the mounting pins 252 in the longitudinally extending portions 260 of the slots 254, as illustrated in FIG. 15. This prevents vertical movement of the chassis 250 with respect to the slides 10. (Column 7, lines 14-25).

Thus the mounting pins are lowered into the slots 254 in Brock et al. The proposed modification in the office action rejection would change way the mounting pins are fit into the slots. This would not be an improvement of Brock et al. and for at least this reason would not have been obvious.

For the above reasons, the combination of Brock et al., Lauchner et al. and Cheng would not have been obvious.

The rejection of claims 18-19 and 26-27 under 35 U.S.C. 103(a).

Claims 18-19 and 26-27 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al. and Cheng. The office action urges

it would have been obvious to modify the structure of Brock et al by providing the arm of the post retainer formed to include a retention aperture for the purpose of providing a secured engagement between the mounting post 210 and the post retainer, as taught by Lauchner et al... (office action page 7) and

it would have been obvious, in view of Cheng, to modify the slot of Block et al by providing a slot surrounded in the plane of the wall by the generally flat wall of the load-carrying slide to permit the post only to enter the slot by moving generally perpendicular to the plane of the generally flat wall in order to allow quick mounting of a piece of equipment to the load carrying slide without the use of tools as taught by Cheng... (office action page 8).

Claim 18

Claim 18 is directed to a telescoping slide assembly comprising slides movable relative to one another, the load-carrying slide having a generally flat wall and being formed to include a slot surrounded in the plane of the wall by the generally flat wall, and a post retainer coupled to

the load-carrying slide and formed to include a retention aperture adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position adapted to release the mounting post from the slot and the retention aperture.

As noted above with respect to the rejection of claim 31, slot 254 in Brock et al. is not surrounded in the plane of the wall by the generally flat wall as required in claim 18. It would not have been obvious to modify Brock et al. by replacing Brock et al.'s slot 254 with the keyhole slot in Cheng because replacing the open top slot of Brock et al. with a closed slot would change the operation of Brock et al. and such change weighs against a conclusion of obviousness. Stated differently, it would not be an improvement of Brock et al. to try to fit the mounting posts into the slots from the side as opposed to lowering them into the slot from the top and for at least this reason would not have been obvious.

For the above reasons, the combination of Brock et al., Lauchner et al. and Cheng would not have been obvious.

Claim 19

Claim 19 depends from claim 18 and avoids the prior art rejection for at least the reasons set forth above with respect to the rejection of claim 18.

Claim 26

Independent claim 26 is directed to a telescoping slide assembly comprising slides movable relative to one another, a generally flat wall of the load-carrying slide being formed to include forward and rearward slots, each slot being adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide, at least one of said slots being formed to permit the post only to enter the slot by moving generally perpendicular to the plane of the generally flat wall, and a post retainer including a body formed to include a retention aperture and a base coupled to the post retainer and to the load-carrying slide, the body being arranged to move relative to the base from a slot-closing position blocking exit of a mounting post located in the rearward slot and in the retention aperture from the rearward slot to a slot-opening position allowing movement of a mounting post into and out of the rearward slot.

For the same reasons as discussed above with respect to claim 1, it would not have been obvious to provide a hole in the lock arm in Brock et al. and even if a hole were provided it would not be operable to lock the head portion 255 since the head portion 255 would not extend into and through the hole. The rationale discussed on this point with respect to the rejection of claim 1 is relied on, but for purpose of brevity is not repeated here.

For the same reasons as discussed above with respect to claims 18 and 31, it would not have been obvious to modify Brock et al. by replacing Brock et al.'s slot 254 with the keyhole slot in Cheng because replacing the open top slot of Brock et al. with a closed slot would change the operation of Brock et al. and such change weighs against a conclusion of obviousness. It would not be an improvement of Brock et al. to try to fit the mounting posts into the slots from the side as opposed to lowering them into the slot from the top and for at least this reason would not have been obvious.

For the above reasons, the combination of Brock et al., Lauchner et al. and Cheng would not have been obvious.

The rejection of claims 24-25 and 28-30 under 35 U.S.C. 103(a).

Claims 24-25 and 28-30 stand rejected under 35 U.S.C. 103(a) as being obvious over Brock et al. in view of Lauchner et al., Cheng and Klakovich.

Claims 24-25 depend, directly or indirectly, from claim 18 and avoid the prior art rejection for at least the reasons set forth above with respect to the rejections of claim 18. Claims 28-30 depend, directly or indirectly, from claim 26 and avoid the prior art rejection for at least the reasons set forth above with respect to the rejection of claim 26.

Conclusion of Argument

From the above, it is readily apparent that the relied on prior art does not provide a proper showing of obviousness for the subject matter of claims 1-31. Accordingly, the final rejection is in error. For the foregoing reasons, the appellant, respectfully, requests that the rejections of claims 1-31 be reversed and the application with claims 1-31 be allowed.

It is respectfully requested that the appeal brief fee be charged to the following deposit account and that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and shortages in other fees, be charged, or any overpayment in fees be credited, to the Account of Barnes & Thornburg, Deposit Account No. 10-0435 (3467-72965).

Respectfully submitted,

BARNES & THORNBURG LLP

A handwritten signature in cursive script, reading "Richard B. Lazarus".

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Claims Appendix

1. A telescoping slide assembly comprising

interconnected load-carrying, intermediate, and stationary slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a keyhole-shaped slot providing an enlarged-diameter entry and exit portion and a narrow-width post-retainer portion, the keyhole-shaped slot being adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide, and

a post retainer including a base coupled to the load-carrying slide and an arm formed to include a retention aperture and being coupled to the base to move relative to the load-carrying slide between a slot-opening position lying away from the load-carrying slide to allow movement of the mounting post into the enlarged-diameter entry and exit portion of the keyhole-shaped slot and a slot-closing position receiving the mounting post in the retention aperture upon movement of the mounting post from the enlarged-diameter entry and exit portion into the narrow-width post-retainer portion of the keyhole-shaped slot.

2. The assembly of claim 1, wherein the arm includes an actuator and a body arranged to interconnect the actuator and the base, the body is formed to include the retention aperture, and the actuator includes means, facing toward the enlarged-diameter entry and exit portion of the keyhole-shaped slot, for intercepting a mounting post moving into the enlarged-diameter entry and exit portion and bending the body to cause the body to move away from the load-carrying slide so that the mounting post can pass from the enlarged-diameter entry and exit portion of the keyhole-shaped slot into the narrow-width post-retainer portion of the keyhole-shaped slot and the retention aperture formed in the body whereupon the actuator moves toward the load-carrying slide under a restoring force applied by the body to block removal of the mounting post from narrow-width post-retainer portion and the retention aperture.

3. The assembly of claim 2, wherein the arm further includes a lift tab arranged to lie at an angle relative to the body and to the load-carrying slide to provide means for allowing a user to grip the retainer and move the actuator away from the load-carrying slide to bend the body to release the mounting post from the retention aperture so that the mounting post is free to move from the narrow-width post-retainer portion of the keyhole-shaped slot into the enlarged-diameter entry and exit portion of the keyhole-shaped slot in preparation for removal of the mounting post from the keyhole-shaped slot.

4. The assembly of claim 2, wherein the load-carrying slide includes a vertically extending upper lip, a horizontally extending upper flange coupled to the vertically extending upper lip, a vertically extending lower lip, a horizontally extending lower flange coupled to the vertically extending lower lip, and a vertically extending wall interconnecting the horizontally extending upper and lower flanges, and the vertically extending wall is formed to include the keyhole-shaped slot and is coupled to the base.

5. The assembly of claim 4, wherein the body of the arm is wider than the narrow-width post-retainer portion of the keyhole-shaped slot and a portion of the body lies adjacent to the vertically extending wall to block movement of the mounting post from the narrow-width post-retainer portion into the enlarged-diameter entry and exit portion upon movement of the retainer to the slot-closing position.

6. The assembly of claim 4, wherein a single piece of spring metal is formed to define the base and body of the retainer, the base is welded to the vertically extending wall, side edges of the body are arranged to lie in spaced-apart relation to the horizontally extending upper and lower flanges, and the body is arranged to cause a portion of the body to cover a portion of the narrow-width post-retainer portion of the keyhole-shaped slot and to cause the retention aperture to lie in alignment with the narrow-width post-retainer portion of the keyhole-shaped slot to allow the mounting post to extend through the narrow-width post-retainer portion and the retention aperture.

7. The assembly of claim 1, wherein a single piece of spring metal is formed to define the post retainer and the post retainer is arranged to lie between the load-carrying and intermediate slides upon movement of the load-carrying and intermediate slides to a retracted position in the stationary slide.

8. The assembly of claim 7, wherein the arm includes a distal end formed to include a lift tab arranged to lie at an acute angle relative to a vertically extending wall included in the load-carrying slide and formed to include the keyhole-shaped slot.

9. The assembly of claim 8, wherein the arm includes a body formed to include the retention aperture and arranged to lie between the base and the lift tab and the body is arranged to lie adjacent to the vertically extending wall upon movement of the post retainer to the slot-closing position.

10. The assembly of claim 8, wherein the arm includes a body formed to include the retention aperture and arranged to lie between the base and the lift tab and the body is bendable to cause a portion thereof formed to include the retention aperture to move away from the vertically extending wall upon movement of the post retainer to the slot-opening position.

11. The assembly of claim 7, wherein the arm includes an actuator arranged to overlie at least a portion of the enlarged-diameter entry portion of the keyhole-shaped slot to intercept a mounting post moved therethrough when the post retainer is moved to assume the slot-closing position.

12. The assembly of claim 11, wherein the arm further includes a body made of a spring metal and formed to include the retention aperture and arranged to lie between the base and the actuator.

13. The assembly of claim 11, wherein the arm further includes a lift tab coupled to the actuator and arranged to extend at an angle relative to the base in a direction toward the intermediate slide upon movement of the load-carrying and intermediate slides to a retracted position within the stationary slide.

14. The assembly of claim 1, wherein the arm includes an actuator arranged to overlie at least a portion of the enlarged-diameter entry and exit portion of the keyhole-shaped slot to intercept a mounting post moved therethrough when the post retainer is moved to assume the slot-closing position.

15. The assembly of claim 14, wherein the arm further includes a bendable body made of a spring metal and the bendable body is arranged to interconnect the base and the actuator and configured to bend during movement of the post retainer from the slot-closing position to the slot-opening position in response to a force applied by the mounting post to the actuator.

16. The assembly of claim 15, wherein the body is formed to include the retention aperture.

17. The assembly of claim 14, wherein the arm further includes a lift tab coupled to the actuator and arranged to extend at an angle relative to the base in a direction toward the intermediate slide upon movement of the load-carrying and intermediate slides to a retracted position within the stationary slide.

18. A telescoping slide assembly comprising interconnected load-carrying, intermediate, and stationary slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide having a generally flat wall and being formed to include a slot surrounded in the plane of the wall by the generally flat wall, and

a post retainer coupled to the load-carrying slide and formed to include a retention aperture adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position adapted to release the mounting post from the slot and the retention aperture.

19. The assembly of claim 18, wherein the retainer is a strip of spring metal including a base fixed to the load-carrying slide and a body cantilevered to the base and formed to include the retention aperture.

20. A telescoping slide assembly comprising

interconnected load-carrying, intermediate, and stationary slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a slot,

a post retainer coupled to the load-carrying slide and formed to include a retention aperture adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position adapted to release the mounting post from the slot and the retention aperture, and

wherein the post retainer further includes a distal end formed to include a lift tab arranged to extend at an angle relative to the base in a direction toward the intermediate slide upon movement of the load-carrying and intermediate slides to a retracted position within the stationary slide.

21. The assembly of claim 20, wherein the post retainer further includes an actuator arranged to interconnect the body and the lift tab and configured to provide means for intercepting a mounting post moving into an entry and exit portion of the slot to move the body relative to the load-carrying slide so that the mounting post is free to move in the slot to a post-retainer portion of the slot and into the retention aperture formed in the body.

22. The assembly of claim 21, wherein the slot is keyhole-shaped and includes the entry and exit portion at one end thereof and the post-retainer portion at another end thereof.

23. A telescoping slide assembly comprising

interconnected load-carrying, intermediate, and stationary slides movable relative to one another to extend and retract the load-carrying and intermediate slides relative to the stationary slide, the load-carrying slide being formed to include a slot,

a post retainer coupled to the load-carrying slide and formed to include a retention aperture adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide and arranged to extend through the slot formed in the load-carrying slide, the post retainer being movable relative to the load-carrying slide between a slot-closing position adapted to retain at the same time the mounting post in the slot and the retention aperture and a slot-opening position adapted to release the mounting post from the slot and the retention aperture, and

wherein the post retainer includes, in series, a base, a body formed to include the retention aperture, an actuator arranged to intercept a mounting post moving into an entry and exit portion of the slot, and a lift tab arranged to extend at an angle relative to the body.

24. The assembly of claim 18, further comprising a slide retainer coupled to the load-carrying slide to lie in spaced-apart relation to the post retainer and configured to engage a retraction stop included in the intermediate slide to block movement of the load-carrying slide relative to the intermediate slide from a fully extended position toward a retracted position within the intermediate slide.

25. The assembly of claim 24, wherein the slide retainer includes a base coupled to the load-carrying slide, a movable arm cantilevered to the base, and a button appended to a distal portion of the movable arm and arranged to extend into a button retention aperture formed in the intermediate slide and bordered by the retraction stop during movement of the load-carrying slide relative to the intermediate slide.

26. A telescoping slide assembly comprising

interconnected load-carrying, intermediate, and stationary slides movable relative to one another to extend and retract the load-carrying and intermediate slides, a generally flat wall of the load-carrying slide being formed to include forward and rearward slots, each slot being adapted to receive a mounting post coupled to a piece of equipment to be carried on the load-carrying slide, at least one of said slots being formed to permit the post only to enter the slot by moving generally perpendicular to the plane of the generally flat wall, and

a post retainer including a body formed to include a retention aperture and a base coupled to the post retainer and to the load-carrying slide, the body being arranged to move relative to the base from a slot-closing position blocking exit of a mounting post located in the rearward slot and in the retention aperture from the rearward slot to a slot-opening position allowing movement of a mounting post into and out of the rearward slot.

27. The assembly of claim 26, wherein the base is coupled to the load-carrying slide to cause the body to extend over at least a portion of the rearward slot and in a forward direction toward the forward slot.

28. The assembly of claim 26, further comprising a slide retainer coupled to the load-carrying slide to lie in spaced-apart relation to the post retainer and configured to engage a retraction stop included in the intermediate slide to block movement of the load-carrying slide relative to the intermediate slide from a fully extended position toward a retracted position within the intermediate slide.

29. The assembly of claim 28, wherein the slide retainer includes a base coupled to the load-carrying slide, a movable arm cantilevered to the base, and a button appended to a distal portion of the movable arm and arranged to extend into a button retention aperture formed in the intermediate slide and bordered by the retraction stop during movement of the load-carrying slide relative to the intermediate slide.

30. The assembly of claim 28, wherein the slide retainer includes a base, a movable arm cantilevered to the base, and a button appended to a distal portion of the movable arm, the base is coupled to the load-carrying slide to cause the movable arm to extend in a forward direction toward the rearward and forward slots and to position the button to extend into a button retention aperture formed in the intermediate slide and bordered by the retraction stop during movement of the load-carrying slide relative to the intermediate slide.

31. The assembly of claim 1, wherein the keyhole-shaped slot in the load-carrying slide is surrounded in a plane of the wall of the load-carrying slide.

Evidence appendix

None.

Related proceedings appendix

None.